

All analysis is run in accordance with Environmental Protection Agency and Colorado Dept. of Health Water Quality Standards.
This table shows the results of our monitoring for the period of January 1 to December 31, 2013 unless otherwise noted.

Yearly Average Results

Chemical/Parameter	Result	M.C.L.
<u>Based on in-house weekly lab results</u>		
pH	8.15	6.5-8.5 (SMCL)
Temperature	12.8 C	N/A
Alkalinity	32.7 mg/l	N/A
Hardness as CaCO ₃	29.3 mg/l	N/A
Dissolved Oxygen	9.43 mg/l	N/A
Total Dissolved Solids	91.00 mg/l	500 mg/L (SMCL)
Silicate (SiO ₂)	10.90 mg/l	N/A
Turbidity	0.121 NTU	1.0 NTU
Organics (total)	0.019 cm-1	N/A (total)
Color	3.0 ADMI	15 ADMI units (SMCL)
Manganese	0.014 mg/l	0.05 mg/L (SMCL)
Alum (aluminum)	0.002 mg/l	0.05-0.2 mg/L (SMCL)
Chlorine free	0.98 mg/l	4.0 (MRDL)
Chlorine total	1.09 mg/l	4.0 (MRDL)
Fluoride	0.88 mg/l	4.0 mg/L
Iron		0.3 mg/L (SMCL)

Definitions

ADMI = American Dye Manufacturers Institute

BDL = Below Detectable Limit

cm-1 = absorbance per centimeter

MCL = Maximum Contaminant Level

MRDL = Maximum Residual Disinfectant Level

SMCL = Secondary Maximum Contaminant Level

NTU = Nephelometric Turbidity Unit

mg/L = parts per million = mg./l. (milligrams per liter)

ppb = parts per billion = ug. /l. (micrograms per liter)

ppt = parts per trillion

ppq = parts per quadrillion

mrem/yr = millirems per year (radiation absorbed by the body)

pCi/l = PicoCuries per Liter (a measure of radioactivity in water)

N/A = Not Applicable

ND = Non-Detects

NT = Not Tested, Not required by State Regulation, or contaminant exempted by using free chlorine disinfection.

MFL = Million Fibers per Liter

MRL = Minimum Recording Level

TT = Treatment Technique

Microbiological Contaminants

21 samples per month pulled from the distribution system (252 samples/year).

Contaminant	Result	M.C.L.
Total Coliform Bacteria	0 detected	1 positive sample/mo.
Fecal Coliform & E. Coli	0 detected	absent

Giardia and Cryptosporidium Analysis

Analysis run raw water (untreated water entering the plant for treatment)

Contaminant	Result	Sample Date	M.C.L.
For Raw Water:			
Giardia	ND	Quarterly	TT
Cryptosporidium	ND	Quarterly	TT

Regulated Inorganic Chemicals

Chemical	Result	Sample Date	M.C.L.
Antimony	ND	2/20/13	0.006 mg/l
Arsenic	0.00018	2/20/13	0.01 mg/l
Barium	0.0292	2/20/13	2.0 mg/l
Beryllium	ND	2/20/13	0.004 mg/l
Cadmium	ND	2/20/13	0.005 mg/l
Chromium	ND	2/20/13	0.1 mg/l
Cyanide	NT Not Required		0.2 mg/l
Fluoride	0.74	2/20/13	4.0 mg/l
Mercury	ND	2/20/13	0.002 mg/l
Nickel	0.0012	2/20/13	Monitoring Only
Nitrate (as Nitrogen)	0.02	2/20/13	10.0 mg/l
Nitrite (as Nitrogen)	NT Not Required		1.0 mg/l
Nitrate/Nitrite comb.			10.0 mg/L
Selenium	ND	2/20/13	0.05 mg/l
Thallium	ND	2/20/13	0.002 mg/l
Sodium	10.4 mg/l	2/20/13	Monitoring Only

Regulated Volatile Organic Chemicals (VOC)

Chemical	Result	Sample Date	M.C.L.
Benzene	ND	5/15/13	5 ppb
Bromate	NT		10 ppb

Carbon tetrachloride	ND	5/15/13	5 ppb
Chloramines	NT		4 mg/l
Chlorine	0.98	Daily	4 mg/l (MRDL)
Chlorite	0.24	Quarterly	1 mg/l
Chlorine dioxide	0.313	Daily	800 ppb (MRDL)
o-Dichlorobenzene	ND	5/15/13	600 ppb
p-Dichlorobenzene	ND	5/15/13	75 ppb
1,2 Dichloroethane	ND	5/15/13	5 ppb
1,1 Dichloroethylene	ND	5/15/13	7 ppb
cis-1,2-Dichloroethylene	ND	5/15/13	70 ppb
trans-1,2-Dichloroethylene	ND	5/15/13	100 ppb
Dichloromethane	ND	5/15/13	5 ppb
1,2-Dichloropropane	ND	5/15/13	5 ppb
Ethylbenzene	ND	5/15/13	700 ppb
Styrene	ND	5/15/13	100 ppb
Tetrachloroethylene	ND	5/15/13	5 ppb
1,2,4-Trichlorobenzene	ND	5/15/13	70 ppb
1,1,1-Trichloroethane	ND	5/15/13	200 ppb
1,1,2-Trichloroethane	ND	5/15/13	5 ppb
Trichloroethylene	ND	5/15/13	5 ppb
Toluene	ND	5/15/13	1 mg/l
Vinyl Chloride	ND	5/15/13	2 ppb
Xylenes	ND	5/15/13	10 mg/l
Monochlorobenzene	ND	5/15/13	100 ppb
Para Dichlorobenzene	ND	5/15/13	75 ppb

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<u>Total Organic Carbon (TOC)</u>			
Chemical	Result	Sample Date	M.C.L.
Total Organic Carbon	1.64 mg/l	Monthly	TT
<u>Trihalomethanes</u>			
Chemical	Result	Sample Date	M.C.L.
Trihalomethanes (total)	26.18 ppb	Monthly	80 ppb
<u>Haloacetic Acids</u>			
Chemical	Result	Sample Date	M.C.L.
Haloacetic Acids (total)	13.74 ppb	Monthly	60 ppb

Regulated Synthetic Organic Chemicals

Chemical	Result	Sample Date	M.C.L.
2,4-D	BDL	5/15 & 11/15/12	70 ppb
2,4,5-TP (Silvex)	BDL	5/15 & 11/15/12	50 ppb
Alachlor	BDL	5/15 & 11/15/12	2.0 ppb
Atrazine	BDL	5/15 & 11/15/12	3.0 ppb
Aldicarb			3.0 ppb
Aldicarb sulfone			2.0 ppb
Aldicarb sulfoxide			4.0 ppb
Benzo (a) pyrene (PAH)	BDL	5/15 & 11/15/12	0.2 ppb
Carbofuran	BDL	5/15 & 11/15/12	40 ppb
Chlordane	BDL	5/15 & 11/15/12	2 ppb
Dalapon	BDL	5/15 & 11/15/12	200 ppb
Di (2-ethylhexyl) adipate	BDL	5/15 & 11/15/12	400 ppb
Di (2-ethylhexyl) phthalate	BDL	5/15 & 11/15/12	6 ppb
Dibromochloropropane	BDL	5/15 & 11/15/12	0.2 ppb
Dinoseb	BDL	5/15 & 11/15/12	7 ppb
Diquat	BDL	5/15 & 11/15/12	20 ppb
Dioxin (2,3,7,8-TCDD)	NT		30 ppq
Endothall	BDL	5/15 & 11/15/12	100 ppb
Endrin	BDL	5/15 & 11/15/12	2 ppb
Ethylene dibromide	BDL	5/15 & 11/15/12	50 ppt
Glyphosphate	NT		700 ppb
Heptachlor	BDL	5/15 & 11/15/12	400 ppt
Heptachlor epoxide	BDL	5/15 & 11/15/12	200 ppt
Hexachlorobenzene	BDL	5/15 & 11/15/12	1 ppb
Hexachlorocyclopentadiene	BDL	5/15 & 11/15/12	50 ppb
Lindane	BDL	5/15 & 11/15/12	200 ppt
Methoxychlor	BDL	5/15 & 11/15/12	40 ppb
Oxamyl (Vydate)	BDL	5/15 & 11/15/12	200 ppb
PCBs (Polychlorinated biphenyls)	BDL	5/15 & 11/15/12	500 ppt
Pentachlorophenol	BDL	5/15 & 11/15/12	1 ppb
Picloram	BDL	5/15 & 11/15/12	500 ppb
Simazine	BDL	5/15 & 11/15/12	4 ppb
Toxaphene	BDL	5/15 & 11/15/12	3 ppb

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Contaminant	<u>Radionuclides</u>		M.C.L.
	Result	Sample Date	
Radium 226	0.05 pCi/l	6/30/13	5 pCi/L
Radium 228	1.05 pCi/l	6/30/13	5 pCi/L
Radium 226/228 comb.			5 pCi/L
Uranium	0.00 ppb	5/15/11	30ppb
Gross α -particle activity (excluding Radon & Uranium)			15 pCi/L
β -particle & photon activity			4mrem/yr

Corrosion Control

Lead and Copper

Analysis run on 30 samples collected at residences throughout the City. Monitoring performed every three years.

Chemical	Result	Sample Date	Action Level
Lead	0.001 mg/l	July 2011	0.015 mg/l
Copper	0.042 mg/l	July 2011	1.3 mg/l

Langelier Index

Samples collected monthly in distribution system.

Based on outside lab results

Result	Sample Date	S.M.C.L.
-0.970	Monthly	aggressive

Langelier Index = 0 The water is in balance
<0 The water is aggressive
>0 The water is scale forming

Unregulated Contaminates

In 2010 the City of Louisville was requested by the Environmental Protection Agency (EPA) to participate in the Unregulated Contaminate Monitoring Regulation phase 2. These contaminants were analyzed all over the country to determine what future contaminate may become regulated. The following are the results of quarterly analysis for 2010 as required by the EPA.

Contaminate	Result	Sample Date
Dimethoate	ND	Quarterly
Terbufos sulfone	ND	2010
2,2 ¹ ,4,4 ¹ ,tetrabromo-diphenyl ether	ND	
2,2 ¹ ,4,4 ¹ ,6-pentabromo-diphenyl ether	ND	
2,2 ¹ ,4,4 ¹ ,5-pentabromo-diphenyl ether	ND	
2,2 ¹ ,4,4 ¹ ,5,5 ¹ -hexabromobiphenyl	ND	
2,2 ¹ ,4,4 ¹ ,5,5 ¹ -hexabromobiphenyl ether	ND	
1,3-dinitrobenzene	ND	
2,4,6-trinitrotolune	ND	
Hexahydro-1,3,5-trinitro-1,3,5-triazine	ND	
Acetochlor	ND	
Alachlor	ND	
Metolachlor	ND	

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Contaminate	Result	Sample Date
N-nitroso-dimethylamine	ND	Quarterly
N-nitro-methylethylamine	ND	2010
N-nitrosodiethylamine	ND	
N-nitroso-di-n-propylamine	ND	
N-nitroso-pyrrolidine	ND	
N-nitroso-di-n-butylamine	ND	
Alachlor OA	ND	
Acetochlor OA	ND	
Alachlor ESA	ND	
Metolachlor OA	ND	
Acetochlor ESA	ND	
Metolachlor ESA	ND	

In 2012 The City of Louisville Analyzed Unregulated Synthetic

Organic Chemicals.

3-Hydroxycarbofuran	ND	5/15 & 11/15/12
Aldicarb	ND	5/15 & 11/15/12
Aldicarb Sulfone	ND	5/15 & 11/15/12
Aldicarb Sulfoxide	ND	5/15 & 11/15/12
Aldrin	ND	5/15 & 11/15/12
Butachor	ND	5/15 & 11/15/12
Carbaryl	ND	5/15 & 11/15/12
Dicamba	ND	5/15 & 11/15/12
Dieldrin	ND	5/15 & 11/15/12
Methomyl	ND	5/15 & 11/15/12
Metolachlor	ND	5/15 & 11/15/12
Metribuzin	ND	5/15 & 11/15/12
Propachlor	ND	5/15 & 11/15/12